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CIA Studies Sub Vulnerability

Soviets Apparently Detected Strategic Missile Vessels

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The Central Intelligence Agency has started a comprehensive, congressionally ordered, $10 million study to determine if the U.S. missile submarine fleet—the supposedly invulnerable arm of the nation's strategic nuclear force—might be susceptible to detection by the Soviet Union, according to informed sources.

The study is to focus on advanced techniques, particularly involving radar and satellites, that the Soviets might be using to detect U.S. submarines under the sea.

There is sharp disagreement in the U.S. intelligence community and the military about the need for this special study. On occasion the Soviets apparently have succeeded in locating a U.S. submarine patrolling underwater, according to several sources, but those isolated successes should not be confused with the ability to seriously threaten the entire U.S. missile submarine force.

Reagan administration officials have repeatedly stated that the submarine force remains invulnerable, and provides the backbone of America's nuclear deterrent.

One senior official said this week that the CIA study will have to address the issue of what the Soviets may have learned about U.S. submarine capabilities from participants in the alleged Walker family spy ring that is being pursued by federal law enforcement authorities. The Soviets long have made a priority of trying to uncover information about U.S. submarine and antisubmarine tactics, communications and capabilities. Several sources have said that the alleged Walker espionage ring, involving at least four present and former Navy men over a period of up to 20 years, could have jeopardized a range of secrets involving the ability of the U.S. submarine fleet to evade the Soviets, maintain secure communications and locate Soviet submarines.

Rep. Les Aspin (D-Wis.), chairman of the House Armed Services Committee, confirmed yesterday that the CIA study is under way. "I'm slightly uneasy that there might be a problem [of submarine vulnerability]," Aspin said, adding that he has asked the Defense Department to report to Congress this year on submarine vulnerability.

"I don't know the answer, but it's one of the things . . . that I want to dig into," Aspin said.

Several sources said the Soviets have at times succeeded in tracking U.S. submarines. Some said, for example, that Soviet Bear D reconnaissance planes based in Cuba ave flown patrols over submerged U.S. missile submarines in the Atlantic. "They are finding our boomers [missile subs]," one source said.

Other sources said, however, that the Navy has supersecret programs, known only to a few, that effectively thwart any such Soviet capability. A knowledgeable White House official said recently that no new Soviet detection program exists and no breakthrough is projected.

Nonetheless, Congress secretly appropriated at least $10 million for the study last year, instructing the CIA to report back to the president and the Congress in 18 months. Robert M. Gates, the CIA deputy director for intelligence, is in charge of the study that has been under way since early this year.

One informed intelligence official said it would be unwise to prejudge the outcome of the study. "We don't know the answer," this source said, adding that the question is so complicated that "our study won't settle the issue."

The main proponents of the study are said to be a few members of Congress and some staff members, with support from some Air Force and CIA experts. House Armed Services Committee senior staff member Anthony R. Battista was one of the driving forces behind the study, sources said. Battista did not return a reporter's phone calls.

Strategic experts have noted that the U.S. submarine fleet of 36 nuclear-powered boats is perhaps the most redundant system in the world. Five are Trident-class submarines, each carrying 24 ballistic missiles. Each missile carries eight independently targetable warheads—a total of 192 per submarine—and each nuclear warhead is eight times more powerful than the atomic bomb the United States dropped on Hiroshima in 1945.

The remaining 31 U.S. missile submarines are Poseidon-class boats, each carrying 16 ballistic missiles, most loaded with 10 independently targetable warheads. The addition of the new Tridents to the fleet increases the Soviets' detection problem significantly because the submarines have greater range and more ocean in which to hide.

One source who is skeptical of the need for the study said, "Every now and then there comes a report, always sourced to the Air Force, that there is some vulnerability . . . . I'm comfortable saying 'nonsense' . . . . A lot of $10 million[s] are wasted. The fact that Congress said spend some money does not necessarily mean anything."

Another intelligence official said, "The problem is not that great. But it's smart to do a study . . . there are major national security sensitivities here."

The potential strategic significance of a Soviet ability to locate U.S. submarines underwater would depend in large measure on how many American boats could be detected at one time.

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If, for example, about 20 submarines were on patrol at a given time and the Soviets could count on loating six, the United States would retain huge and protected retaliatory power capable of inflicting devastation on the Soviet Union. President Jimmy Carter once observed that the missiles carried by one Poseidon submarine could "destroy every large and medium-sized city in the Soviet Union."

Soviet satellites and submarine-hunting planes may be using new techniques, including the reading of minute changes in surface ocean waves caused by the movement of submerged submarines, rather than the traditional method of detecting submarine noise by using sonar listening devices, sources said.

One possibility, the sources said, is that Soviets could use synthetic aperture radar (SAR) housed in the Salyut 7 space station to bounce radar signals off the ocean and then process them into computer-generated images that might show up as a track on the ocean surface caused by the passage of a submarine below. Other sources said the natural turbulence of the ocean's surface and the depths at which submarines can operate raise serious doubts about the potential effectiveness of such a technique.

During the past several years some of the nation's top scientists, the so-called Jason group, have studied the potential SAR problem in a series of classified studies for the Pentagon. Dr. Edward Y. Harper, technical director of the Navy's missile submarine security program, told the Senate Armed Services Committee last year in secret testimony later made public in censored form that, "Our assessments are that synthetic aperture radars cannot detect, [deleted] submarines."

The Navy's Poseidon and Trident submarines carry half of the nation's nuclear missile warheads, while the Soviets have three-quarters of their nuclear warheads based on land.

For years, experts in and outside government have concluded that the U.S. submarine force and antisubmarine warfare (ASW) program were far ahead of the Soviets', though the gap has narrowed in recent years.

The technology and tactics that have kept U.S. submarines undetected are among the country's most highly classified secrets. Commodore Roger F. Bacon, director of the Navy's strategic nuclear warfare division, told the Senate Armed Services Committee last year that "the United States has avoided technological surprise by the Soviets in over 2,200 strategic submarine deterrent patrols."

One senior Reagan administration official said, "The strategic ramifications [of the new study] could not be greater. Everyone is holding their breath to see what the CIA finds."

The potential political repercussions also are large. "The popular view in Congress is that the MX [missile] is not needed because our submarines have no vulnerability," said one senior Republican senator.

Several Navy intelligence sources suggested that the whole issue of the potential vulnerability of the missile submarine fleet has been raised by the Air Force as part of its effort to win congressional approval of the MX missile. In fact, one of the first reports on the detection of U.S. submarines was filed by the Air Force staff at the National Security Agency (NSA) last year, the sources said. And Air Force magazine published a report on the Soviets' potential use of SAR to detect submarines.

However, Defense Department officials said, the MX would not solve the problem of vulnerable missile submarines because it is scheduled for deployment in existing Minuteman missile silos, whose precise location the Soviets can determine from satellites in space, and then target.

One source familiar with the new CIA study said the Navy started several years ago to conduct its own computer modeling experiments on "nonacoustic" detection techniques. Based on that work, the intelligence community concluded in mid-1983 that the Soviets could not be using changes in ocean surface waves as a means to find U.S. submarines, the source said.

The CIA reportedly dissented from that conclusion on the basis that the Navy studies had not been thorough enough.

About the same time, the Air Force staff at NSA, the supersecret agency that intercepts worldwide communications traffic, filed a report that said the Soviets had the capability to find some submarines, perhaps by using radar to read the ocean surface.

The report was based on intercepted communications of Soviet antisubmarine patrol aircraft, sources said. The report was then later withdrawn. One source said that was because NSA later determined the communications were part of a deception program by the Soviets to make U.S. intelligence believe they had located the submarines.

Another source said that the report was withdrawn because of intense pressure from the Navy. The source said that some of the skippers of U.S. submarines have voiced concern about the situation.

Over the last few years there also have been some reports from the Navy's own ocean surveillance analysts that Soviet ASW planes seemed to be finding U.S. missile submarines, sources said.

The combination of these reports led a few members of the House and Senate to push for funding of the new study, they added.

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